Amendments to the Specification:

Please replace the paragraph located on page 3, line 23 with the following amended paragraph:

These needs are met by the invention, which preferentially grows metallic nanowires (MeNWs) at a selected pattern of spaced apart locations between a conductive surface that is deposited on a substrate and a patterned catalyst array, using lithography or a similar process to define the MeNW growth locations (as MeNW pillars). An insulation layer (e.g., Si, Si_aO_b or Si_cN_d) is deposited around the catalyst patterned array and the MeNW pillars, to fill the gaps between adjacent MeNW pillars, and chemical mechanical polishing is applied to remove the catalyst patterned array[[ ]], a portion of the MeNW growth layer and a portion of the insulation layer, to provide exposed ends of the MeNW pillars.

Please replace the paragraph located on page 5, line 4 with the following amended paragraph:

Figure 1A/1B is a flow chart of a procedure for practicing the invention. In step 11 (illustrated in Figure 2A), an electrically conductive layer 22, preferably having a thickness in the range 0.2 – 250 nm, is provided on an exposed surface of a substrate 21, which may have any reasonable thickness. The substrate material may be silicon or a silicon on insulator, and the conductive layer material may be Cu, Ag, Au, Pd, Pt, Ni, Fe, Co, Ir, Ti, Zr, and/or a metal-doped silicide. Optionally, two or more spaced apart diffusion barriers 23 of a selected barrier material (e.g., Ti_uN_v or Ta_uN_v of thickness 1-10 nm, where u and v are positive numbers) is provided at one, two or more laterally displaced locations in the conductive layer 22, to limit transverse movement of the conductive layer ~~mat3erial~~material, in step 12.

Please replace the paragraph located on page 6, line 16 with the following amended paragraph:

Where an electrical field **E1**, (having a selected intensity in a range such as 20 volts/cm $\leq |\mathbf{E1}| \leq$ 5,000 volts/cm) is oriented substantially perpendicular to the plane $\prod$, is applied during MeNW growth (optional step 15 in Figure 1, illustrated in Figure 2C), the lengths L(MeNW) for which the MeNW pillars grow perpendicular to the plane $\prod$ can be extended to an estimated 200 μm, or perhaps higher.

Please replace the paragraph located on page 7, line 1 with the following amended paragraph:

In optional step 17 (illustrated in Figure 2D), a thin diffusion barrier 26 (e.g., Ti_uN_v or Ta_uN_v, of a thickness 1-10 nm, where u and v are positive numbers) is deposited around one or more of the exposed surfaces of the MeNW pillars 25.